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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,014	02/26/2004	Tomio Yaguchi	501.43527X00	6736
20457	7590	09/12/2006	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			HO, ALLEN C	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,014	Applicant(s) YAGUCHI ET AL.	
	Examiner Allen C. Ho	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20060623</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the partition walls each of which has one end in contact with a second-panel-side surface of the control electrode must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter as claimed in claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the plurality of control electrodes are electrically connected to each other through conductive films. It is unclear how the control electrodes can be electrically connected to each other through the conductive films since the control electrodes are only connected to the partition walls as recited in claim 3.

Claim 5 recites conductivity is established between the portions which are in contact with the second panel and the one ends of the partition walls which are in contact with the control electrodes. Conductivity can only be established between two objects (the second panel and the control electrodes) that are spaced apart, not within the same object (the partition wall). Furthermore, it is unclear whether the conductivity is established by conductive partition walls or some other means.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 6, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee *et al.* (U. S. Patent No. 6,765,346 B2).

With regard to claim 1, Lee *et al.* disclosed a flat panel display device that comprises: a first panel (4) having a plurality of electron beam source which are arranged in a matrix form, the electron beam sources being constituted of cathodes (16, 18) which emit electrons and control electrodes (26) which are electrically insulated from the cathodes and control the quantity of electrons emitted from the cathodes, and a plurality of cathode lines (10) and a plurality of control electrode lines (6), which in a state in which the cathodes and the control electrodes which constitute respective electron beam sources are respectively separated into a plurality of sets, electrically connect the cathodes and the control electrodes for the respective sets, the electron beam sources designated by respectively selecting some of the cathode lines and the control electrode lines serving to emit electrons; and a second panel (2) having phosphors (22) which emit light when impinged upon by electrons emitted from the electron beam sources corresponding to the arrangement of the electron beam sources; wherein the cathodes (16, 18) and the control electrodes (26) have surfaces, which are arranged on the first panel so as to lie in

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a first flat cross-section plane which is parallel to a surface of the second panel having phosphors, and further, the control electrode lines (6) have surfaces, which are arranged so as to lie in a second cross-sectional plane, which differs from and is spaced from the first cross-sectional plane (Fig. 5).

With regard to claim 3, Lee *et al.* disclosed a flat panel device according to claim 1, wherein the flat panel display device includes partition walls (30a, 30b), each of which has one end thereof in contact with a second-panel-side surface of the control electrode and another end thereof extending in a direction toward the second panel.

With regard to claims 6 and 7, Lee *et al.* disclosed a flat panel device according to claim 1, wherein the cathodes include an electron emission material (12), wherein the main component of the electron emission material is one selected from a group consisting of carbon nanotubes, micro carbon fibers, diamond, diamond-like carbon (column 4, lines 50-58).

Allowable Subject Matter

7. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 23 June 2006 have been fully considered but they are not persuasive.

The applicants argue that the amended Fig. 6 shows that each of the partition walls (5) has one end in contact with a second-panel-side surface of the control electrode (7). The examiner respectfully disagrees. The amended Fig. 6 merely shows that each of the partition walls has one end in contact with the substrate (2) of the first panel; Fig. 6 does not show contact between the partition walls and the control electrodes.

9. Applicant's arguments filed 23 June 2006 with respect to the rejection(s) of claim(s) 1-7 under 102(b) or 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lee *et al.* (U. S. Patent No. 6,765,346 B2).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- (1) Lee *et al.* (U. S. Pub. No. 2004/0119396 A1) disclosed a flat panel display that comprises cathodes (10) and control electrodes (14) in a first flat cross-sectional plane, and control electrode lines (6) in a second cross-sectional plane spaced apart from the first cross-sectional plane.
- (2) Jo *et al.* (U. S. Patent No. 6,621,232 B2) disclosed a flat panel display that comprises cathodes (10) and control electrodes (14) in a first flat cross-sectional plane, and control electrode lines (6) in a second cross-sectional plane spaced apart from the first cross-sectional plane.

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11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Allen C. Ho, Ph.D.
Primary Examiner
Art Unit 2882

29 August 2006